

## Confocal Microscope Facility

**The combination of the Zeiss LSM 510 Meta confocal microscope and two picosecond Coherent Titanium:Sapphire lasers allows us to perform a wide array of microscopies on chemical and biological systems.**



**Microscopies used:**

- confocal reflectance**
- confocal fluorescence**
- multi-photon fluorescence (requires external lasers)**
- second harmonic generation (requires external lasers)**
- coherent anti-Stokes Raman scattering (requires external lasers)**

**The multiple excitation wavelengths, detectors, and filter sets of the Zeiss microscope allow simultaneous implementation of multiple microscopies.**

**Laser lines available: 458, 488, 514, 543, 633 nm**

**700 – 970 nm (picosecond/femtosecond) from the external Ti:Sa lasers**

**Detectors available: two photomultiplier tubes (backward, or epi, direction)**

**one diffraction grating/photomultiplier tube combination (epi direction)**

**-- allows many signals of different wavelength to be collected simultaneously**

**one nondescanned photomultiplier tube detector (forward or epi direction)**

**The wide array of features of the Zeiss microscope allows implementation of the techniques mentioned above and allows the study of a wide range of chemically, physically, and biologically interesting systems.**